H2020 - Research and Innovation Action

APPLICATE

Advanced Prediction in Polar regions and beyond: Modelling, observing system design and LInkages associated with a Changing Arctic climaTE

Grant Agreement No: 727862

Milestone No. 11

First Meeting of User Group

Milestone submission

Milestone No	11
Milestone title	First meeting of User Group
Status	Final
Lead Beneficiary	13 - AP
Contributors	☐ 1 – AWI ☒ 2 – BSC ☐ 13 – AP
Due Date	31 August 2017
Delivery Date	23 October 2017

This project has received funding from the European Union's Horizon 2020 Research & Innovation programme under grant agreement No. 727862.

Table of Contents

EXECUTIVE SUMMARY

The main objective of the APPLICATE project is to develop enhanced predictive capacity for weather and climate in the Arctic and beyond, and to determine the influence of Arctic climate change on the Northern Hemisphere. To produce usable and trustworthy predictive information for decision making, APPLICATE actively engages with users, including representatives of various economic sectors and local communities.

This Milestone describes the first APPLICATE User Group meeting. The User Group is composed of representatives from all the APPLICATE targeted stakeholder groups (the scientific community and international organisations, the public and private sectors, and the society at large including the general public and local communities). The first meeting was held online with the main aim for the project WP7 partners and the participants to get to know each other, learn about the project and start a discussion about Arctic priority issues and sectors where enhanced predictive capacity is needed. This first virtual meeting was also an introduction to the first face-to-face User Group meeting that will take place during the Arctic Circle Assembly in Reykjavik, in October 2017.

1. INTRODUCTION

The APPLICATE User Group (UG) applies the focus group approach, which is an effective method for developing discussion and gathering views from different stakeholders on the matter of interest for the project. The UG will thus support the project with an external user-specific perspective by providing continuous feedback on the relevance of the results obtained and the way they are presented. Regular feedback from this group will assure that the products generated in the project are tailored to user needs, maximising their relevance and usability. The User Group will serve the project as an additional advisory mechanism.

The first UG meeting was conducted online and was an introductory meeting where participants got to know each other, heard about the project's hitherto work and started the discussion about the priority topics and sectors from the Arctic that should be considered by the project when developing user relevant climate metrics.

2. METHODOLOGY

The APPLICATE User Group will apply the focus group technique, which allows a guided discussion between a small but divers group of stakeholders. The focus group technique is a set of procedures to collect and analyse qualitative data (Merton, 1987). A focus group is usually a group of 6-12 participants who share a common interest, or are similar in some other way, and discuss together an issue of specific interest to the research. A focus group technique relies on group interaction and dynamics to stimulate discussion, thinking and contributions from the participants, providing perspectives that could not be obtained with other participatory techniques (Asbury, 1995). The job of the group facilitator is to study the reactions and answers of the participants and make the discussion dynamic, but balanced, permitting all the participants to express their views.

Recruiting focus group participants and finding a suitable place and time for the meeting can be time-consuming and expensive, particularly when participants come from different geographical regions – such as the case with the APPLICATE UG. For that reason, APPLICATE decided to hold UG meeting both online and in person.

The first step was to carefully identify participants. The aim is to have representatives from all different sectors with the stake in the topic at hand – enhanced climate predictions in the Arctic. It is also recommendable to have a balanced group, when it comes to sex, geographical location, and professional position.

APPLICATE listed 12 stakeholders, all from different institutions or companies, spreading from Alaska to Korea. The first task was to find the time that would fit in office hours in so many different time zones. We thus proposed three different time slots in two different days. The invitation letter contained a link to the doodle poll that let participants select the date and the time. As a result, the first UG meeting was composed of two sessions, one with the representatives from North America and the other with participants from Europe, Russia and Asia. The list of all invited participants is available in the Annex I, while the Results and Discussion section gives more details on who were the participants in the first two online sessions. The project will however keep the composition of the group flexible to changes and enlarging; if we realize that

some sectors or user groups are underrepresented in the project, while their feedback might be valuable, we will invite new members to the User Group.

The first UG meeting had three components:

1. Participants and project presentation
2. Discussion about participants expectations from the project and their anticipated contribution
3. Discussion about knowledge gaps, priority topics and sectors for the project.

3. STAKEHOLDERS DISCUSSION

The first UG meeting was composed of the two online sessions. Two stakeholders from Alaska, WP7 partners from AP and BSC and the project coordinator Thomas Jung (AWI) participated in the first session on 26 September. Three other stakeholders, from Norway, Russia and China participated in the second session, facilitated by the WP7 partners from AP and BSC, on 27 September. The list and affiliation of the UG participants is provided below:

- Nils Andreassen, executive director of the Institute of the North, Alaska, USA.
- Mead Treadwell, president of PT Capital, Alaska, USA.
- Mikhail Pogodaev, director of Northern Forum and chair of the board of the Association of World Reindeer Herders (WHR).
- Anders Oskal, director of the International Centre for Reindeer Husbandry (ICRH) and member of the Association of World Reindeer Herders (WHR).
- Jie Zhang, associate of the Polar Research Institute of China (PRIC)
- Cindy Dickson, executive director from the Arctic Athabaskan Council, Canada.

The following section presents key participants' reflections about their expectations from the project as well as their expected contribution. The provided text is taken from the meeting transcript.

Nils Andreassen*: The Institute of the North could provide links with different Arctic Council activities related to renewable energy, such as the Arctic Energy conference, that they are in charge of organising in Iceland in 2019. The Institute is project manager in the SDWG Arctic Council project the Arctic renewable energy atlas, which is collecting renewable energy resource potential data and developing visualizations to map renewable resources in collaboration with Arctic Portal and various Arctic national bodies. Nils is also involved in other projects dealing with energy efficiency and sustainable living.*

Mead Treadwell*: Former LT of Alaska and chair of the US Arctic Commission. PT Capital is working on Arctic shipping, where there is a very strong need for expertise and for reliable climate and ice forecasts. They are working on a shipping project and are writing a report to by published in the name of the Arctic Circle.*

Anders Oskal*: ICRH could support the project with their network composed of all reindeer communities across the Arctic and the national states, including China, Mongolia, Scotland, UK and 8 other Arctic states. In addition ICRH has some capacity on the scientific side also for science related initiatives.*

Jie Zhang*: PRIC is interested in collaborating closely with APPLICATE WP6, since they are developing the Arctic Observation Centre, increasing their collaboration with SAON for interoperable Arctic data management and are operating research stations and vessels in both the Arctic and Antarctic.*

Mikhail Pogodaev*: Northern Forum, an organization of regional cooperation and observer to the Arctic Council, has a Working Group on climate change, which unites representatives of the Northern region governments and experts in climate change. The main purpose of this Working Group is to develop guidelines for climate change adaptation in the Northern regions. It is about developing adaptation strategies and plans. They can provide some expertise on the effects of the changing climate and influences on the life of northern people at the local and regional levels. Reindeer herders were the first who faced climate change, because they are very close to nature and their observations and traditional knowledge can be beneficial to the project.*

Cindy Dickson: *The Arctic Athabaskan Council focuses on following research projects that are taking place, and if Athabaskan communities are interested in participating in these projects, they try to make this happen. They are interested in having a stronger collaboration with researchers who can explain things to laymen, using suitable terminology, explaining for example what does climate change mean for reindeer in the Arctic.*

The participants then discussed about the observed knowledge gaps and the priority topics for the APPLICATE research:

Nils Andreassen*: Weather and climate data will be strongly needed for guiding the response in rescue activities and making sure that we are able to respond appropriately over a big area. People dealing with other management issues will be good users of these data as well, for example agency officials and indigenous people working on food security.*

Mead Treadwell*: Awareness about the modelling and predictive capabilities that are out there is the first step. We need to know which stakeholder groups are using which information and where the gaps are. This is the way to create something useful. Gaps could be related to processes occurring both in the short and in the long term. In the long term, for instance, people needs this information to understand that continuous permafrost is something that needs to be preserved in construction or that the constructions need to build around in a different way.*
A gap analysis would be really helpful for this group and would be a good way to bring in other stakeholders and get their feedback.

Anders Oskal*: Climate change will have very diverse impact, depending on where you are in the Arctic. There is no one solution for all. If we want to enhance the capacity of different sectors to adapt, it is not enough to make a sectoral strategy. Instead, we need to distinguish between different geographical regions. E.g. reindeer herding is today composed of such a wide variety of topographical, geographical, climatically*

different settings and contexts, that the strategies would need to adapt for each of them.
Another gap is in the availability of data series. Data series are needed to make robust models and allow statistical downscaling. The challenge is that reindeer herding is widespread across the Arctic and we don't have data series for all these regions. Then again, in some cases data series exist, even going 100 years back, but often they are not digitalised, and thus not accessible.
Another issue is that for reindeer herding it is not the annual average that is relevant, the situation can change dramatically on daily bases.
Importance of wind data is yet another recognised gap because wind is crucial when it comes to icing events. Unfortunately, downscaling of wind is extremely demanding.
Combination of scientific results and local terminology is needed to make information more usable and pertinent to the local settings.

Mikhail Pogodaev*: Flood is a very serious challenge for many parts of the northern regions, including Sakha Republic, Krasnoyarsky krai, Alaska and many other parts.*
There is a serious gap between science based reports on climate change and decision making. Often the scientific data, reports and recommendations are not well implemented at the regional and local level. We should analyse where the gaps in using data are. End users, such as local and regional governments, they need final information, they don't have capacity and time to analyse the data; scientific organisations should help them with this. This gap analysis is important to see how we can improve this management at regional and local level.
Climate data is one thing, but end users, regional governments and other local actors are more interested in information – which is analysed data.
Another priority should be that users are the source of information. Reindeer herders observe the nature every day, they see the changes, and they can provide important information.

Cindy Dickson: *The main food source for us is caribou. Sometimes caribous can't find food because the ground freezes and then thaws and then freezes and thaws again and it's hard for them to dig for food. The changing season is another challenge. Having a more solid and reliable information could be very helpful. If people knew these big changes in the weather…we are not even getting really cold weather as much any more, and animals need that for their fur.*

The emphasis now is in clean energy and clean technology. Clean technologies are being developed and that's good for the North and it has been tested, but many of our communities just can't afford it. We are putting solar panels and they are really expensive to fly up in the Arctic. And some technologies don't work because the temperature here goes to -50.

We have looked at emergency preparedness. If there is an airplane crash, who is in charge, do they know what they have to do, where people should go…There needs to be a lot more preparedness and collaboration.

Among other information provided from the UG, there is a reference to the Adaptation Actions for a Changing Arctic (AACA) project, which recently developed three documents presenting three different case studies in the Barents region, in Alaska and in Canada. The scope of the study was very wide, and went beyond the climate change topic, also addressing other changing aspects in the Arctic, such as socio-economic

change etc. However, some information from this project could be relevant for APPLICATE (https://www.amap.no/documents/doc/Adaptation-Actions-for-a-Changing-Arctic-AACA-BeringChukchiBeaufort-Region-Overview-report/1531). In addition, PRIC's data centre is a member of Arctic data community through SAON. They are developing an Arctic observation system, focusing on see ice.

Project introduction, first topic discussions and elaboration has taken place in a more informal way with other designated members of the UG how could not participate in the first formal on-line meetings.

4. CONCLUSIONS AND OUTLOOK

Apart from getting to know each other and introducing the project, the first UG meeting has already provided many useful inputs and suggestions. We will collect all these ideas, together with the information from the first face-to-face UG meeting that is scheduled for October 2017 and will take place during the Arctic Circle Assembly. The feedback collected during the first two meetings will present the bases for the discussion with the UG during the APPLICATE GA2 in Barcelona, in January 2018. Here we will discuss about all these topics and will be able to further the gap analysis suggested by some of the participants in the UG, in order to identify which type of weather and climate knowledge is missing in the Arctic and the lower hemisphere. As a departing point, we will use the list of metrics developed in WP1.2.2, in order to refine it and prioritise topics with the participants. We expect that this analysis will help WP1 define the metrics that are both user relevant and feasible to be provided by the project.

AP and BSC will continue the regular meetings with the UG a few times per year, both through formal online and/or face-to-face meetings and informally through personal interactions. We will continue collecting and analysing the feedback from the UG and provided it to the project scientists, since stakeholder engagement and feedback is important in order to focus the research and to tailor it as possible to the stakeholders real needs. These findings will be reported in D7.11. In addition, feedback and comments from the UG members will be regularly communicated by WP7 to support Project Coordination and Management. UG members will be invited to contribute to the Polar Prediction Matters (PPM) blog **https://blogs.helmholtz.de/polarpredictionmatters/** ,a part of the Year of Polar Prediction effort – YOPP, to broaden the scope of communication and further engage with a larger community. Apart from preserving the stakeholder's voice, the blog will open more communication channels (not only the ones going through WP7 partners) between the UG participants, the research community, other stakeholders and the general public.

5. REFERENCES

Asbury, Jo-Ellen (1995) Overview of Focus Group Research, Qualitative Health Research, 5 (4): 414-420

Merton, R. K. (1987) The focused interview and focus groups. Public Opinion Quarterly, 51: 550-566

6. ACRONYMS

AACA	Adaptation Actions for a Changing Arctic
GA2	General Assembly 2
PPM	Polar Prediction Matters blog
PRIC	Polar Research Institute of China
UG	User Group
WHR	Association of World Reindeer Herders

7. ANNEXES

Table 1 The list of stakeholders invited to participate in User Group

Name of company	Contact person	Country	Field of business
Northern Forum	Dr Mikhail Pogodaev, director	International /Russia	Regional cooperation - Arctic communities
SSW	Piotr Spaczynski, partner	Poland	Legal - Mining / Energy
Korean Maritime Institute - KMI	Justin Kim, Director	Korea	Maritime affairs, research and policy
Institute of the North	Nils Andreassen, Executive Director	Alaska, USA	Economic and resource development, policy
Polar Research Institute of China - PRIC	Dr. Beichen Zhang Jie Zhang	China	Research, policy
DWF LLP	Michael Kingston	UK	Legal - Maritime Policy - Polar Code
PT Capital	Mead Treawell, President	Alaska, USA / international	Arctic Investors
Arctia Shipping	Tero Vauraste, CEO	Finland	Icebreaker company (chair of the AEC)
International Centre for Reindeer Husbandry	Anders Oskal	Kautokeino, Norway	Maintenance and development of a sustainable reindeer husbandry
Indigenous Peoples' Secretariat to the Arctic Council	Anna Degteva, executive secretary	Tromso, Norway	Arctic indigenous peoples interests
Arctic Athabaskan Council	Cindy Dickson, executive director	Canada	The rights of American and Canadian Athabaskan member First Nation governments.
WWF Arctic Programme	Dr. Alexander Shestakov, director	International	Nature conservation in the Arctic